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ABSTRACT

Results of a longitudinal study of the predictive validity of the School Behavior Profile (SBP) filled out by the classroom teachers of 721 first grade children indicated that: (1) First grade SBP scores are significantly related to fourth grade teacher judgments regarding the presence of behavior and attitude problems ($r = -.40$), (2) First grade SBP scores are significantly related to total number of special school placement and special services received by subjects by the end of fourth grade ($r = -.42$). Findings suggest that the SBP can significantly contribute to early identification of "high risk" children likely to require special school treatment. (Author)

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# PREDICTIVE VALIDITY OF A SCHOOL BEHAVIOR RATING SCALE

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Despite the wide array of behavior rating scales developed over the decades since the first published work in this area (Haggerty, Olson and Wickman, 1930), a recent review of 20 selected rating scales (Severson, 1971) led to the conclusion that there remains a paucity of information regarding "important reliabilities and useful validities" for such instruments. As Severson indicated, major goals of behavior rating scales include establishing the earliest possible predictions of later behavior problems. Severson further emphasized the need for rating scales capable of predicting removal from the regular classroom, and one might add, receipt of special school services. This study is designed to establish such "useful" predictive validity.

Assessment of long-term reliability and predictive validity of the School Behavior Profile (SBP) (Balow, 1965) has been underway for several years in conjunction with a continuing longitudinal educational investigation of 1559 children from birth through their teen years. This long-term study provides a unique opportunity for assessing the instrument's efficiency of predicting later behavioral and attitudinal problems.

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## METHOD

### Sample

Subjects were 721 participants in the Educational Follow-Up Project (EFUP), a longitudinal study of the antecedents of school learning and behavior problems (Balow, et al, 1969). The total population (N=1559) is essentially normal on measures of IQ, socioeconomic status, preschool readiness and educational achievement (Rubin, 1972, 1973).

All EFUP subjects for whom there were available first grade SBP scores plus fourth grade teacher ratings and records of special school placements and services were included in the present investigation. EFUP subjects were born over a five-year period from 1960 - 1964. At the time the present data were collected only the older subjects, those born from 1960 - 1962, had entered fourth grade.

### Instruments

The School Behavior Profile (Revised, 1973) is a 58-item behavior checklist on which classroom teachers are asked to indicate the frequency of occurrence of specified observable behaviors on a four-point scale ranging from "Almost Always" to "Almost Never." Items are keyed so that the higher the total score the more positive the rating. Two independent factor analyses of SBP total scores yielded three stable major factors: 1) Poor control-acting out; 2) Developmental immaturity; and 3) Anxious or neurotic.

Previously reported normative data for this instrument (Rubin & Krus, 1973) revealed that the distribution of scores was consistent from kindergarten through fifth grade yielding equivalent means and

standard deviations at each grade level. Significant sex differences were found favoring females over males at all grade levels on total score as well as on Factors I and IL Scores on Factor III tended to favor males over females.

Procedure

Each spring teachers of all EFUP subjects are asked to: a) complete SBP ratings for these subjects, b) indicate on a separate form any special school placements or special school services received by these children, and c) make global judgments regarding the presence or absence of behavior and attitude problems.

Stability of SBP total and factor scores was assessed through correlations between first grade scores and scores obtained during each of the succeeding years through fourth grade.

Predictive validity of the SBP was assessed through (a) correlations between first grade total and factor scores and fourth grade teacher ratings of attitude and behavior, and (b) correlations between first grade total and factor scores and total number of special placements and school services received through fourth grade level.

## RESULTS

Stability of Scores

The internal consistency of the SBP as determined through application of the Spearman-Brown correction for split-half reliability coefficients was previously established as .96 (Rubin & Krus, 1973). The current study provides data regarding the stability of SBP total and

factor scores over both time, grades one through four, and over raters, the different classroom teachers each year.

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Table 1 about here

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Table 1 presents the correlations between SBP scores obtained in first grade and those obtained in grades two, three, and four. Reliability coefficients for Total Scores and for Factors I and II ranged from .38 to .55 with Factor I scores consistently yielding the highest reliability coefficients. Factor III scores were the least reliable with correlations ranging from .09 to .19. The low reliability of Factor III scores may be related to the fact that it is composed of only six items while Factors I and II are composed of 29 and 15 items respectively.

As might be anticipated the highest reliability coefficents were found between first grade and second grade scores with a reduction in the magnitude of the correlations at each succeeding grade level as the time interval between initial and final test administrations increased.

Predictive Validity

Predictive validity was assessed by relating grade one SBP Total and Factor scores to (1) fourth grade teacher ratings of behavior and attitude, and (2) the total number of special services or placements received through grade four. The ratings of behavior and attitude

were global ratings where the teacher responded "yes" or "no" to the questions "Does this child have problems of behavior?" and "Does this child have problems of attitude?" Special placements and services include placement in special class for the educable retarded, retention in grade, placement in resource rooms or in first grade transition classes, referral to the school psychologist or social worker, remedial reading instruction, and individual tutorial help. The occurrence of any of these special services or placements in any year was counted as "1" and all such services and placements were summed over grades one through four. Problems of behavior or attitude and total number of special services or placements would be expected to show negative correlations with SBP scores since the more positive the rating, the higher the SBP score.

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Table 2 about here

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SBP Total score was the most consistently effective predictor across the three criterion variables correlating -.40 with behavior ratings, -.37 with attitude ratings, and -.42 with number of special services received.

Factor I (Acting Out) was the best predictor of fourth grade teacher ratings of both attitude and behavior with correlations of -.42 and -.43 respectively. Factor II (Developmental Immaturity) was the best predictor of total number of actual corrective actions taken

by the school as manifested through special placements and services correlating -.44 with this variable. Factor III was the poorest predictor of the three outcome variables with correlations ranging from -.09 to -.17.

The low reliability and low predictive validity of Factor III (Anxious or Neurotic) scores suggests that although first grade scores on this factor may represent an accurate assessment at the time of the original rating, it would be unwise to predict similar ratings on this variable in later years or to identify individuals as likely recipients of special school services on the basis of scores on this factor.

Summary of results

Stability of scores:

1. Correlations between first grade SBP total scores and scores obtained in the succeeding three grades ranged from .42 to .46 indicating considerable consistency over time and over raters.

2. Scores on Factor I (Poor control-acting out) were even more consistent than total scores over the same time period with correlations of .47 to .55 between first grade and later scores on this factor.

3. Correlations between first grade scores on Factor II (Developmental immaturity) and later scores on the same factor ranged from .38 to .48.

4. Factor III (Anxious or Neurotic) scores had low reliability with correlations of .09 to .19 between first grade and later scores on this factor.

Predictive validity:

1. First grade SBP total scores correlated -.40 with fourth grade ratings of both behavior and attitude.

2. First grade total scores correlated -.42 with total number of special services and special placements through fourth grade.

3. Scores on Factor I (Poor control-acting out) correlated -.42 and -.43 with fourth grade teacher ratings of behavior and attitude respectively, and correlated -.34 with number of special placements and services.

4. Scores on Factor II (Developmental Immaturity) correlated -.28 and -.21 with fourth grade teacher ratings of behavior and attitude, and -.46 with number of special placements and services.

5. Scores on Factor III (Anxious-Neurotic) correlated -.17 and -.09 with fourth grade teacher ratings of behavior and attitude and -.13 with number of special placements and services.

## CONCLUSIONS

Results indicate that employing the SBP as a standardized means of recording teacher observations of school behavior at first grade level can make a significant contribution to the early identification of those children with a high probability of requiring special treatment beyond that of regular classroom instruction during the early elementary school years.

The relationships of the factor scores to the criterion variables indicated that, to some extent, Factors I and II yield differential predictions of fourth grade outcomes with Factor I (Poor control-acting out) scores more closely related to later teacher ratings while Factor II (Developmental Immaturity) scores served as the single best predictor of number of special services and placements.

Classroom teachers are in a unique position to make extensive observations of children in a variety of interactions on a continuing day-to-day basis. A rating scale capable of identifying children at

first grade level who are most likely to emerge as school problems during the next three years can provide a basis for development of early intervention programs designed to prevent or alleviate these problems.

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TABLE 1

Reliability of SBP Total and Factor Scores Over Grades One Through Four (N=721)

| SBP SCORES | GRADE 2 | 3 | 4 |
|---|---|---|---|
| 58-Item Total | .46 | .46 | .42 |
| Factor I (acting out) | .55 | .53 | .47 |
| Factor II (developmental immaturity) | .48 | .46 | .38 |
| Factor III (anxious or neurotic) | .19 | .17 | .09 |

TABLE 2

Correlations of Grade One SBP Total and Factor Scores with Grade Four Teacher Ratings of Behavior and Attitude and with Total Number of Special Services and Placements Through Grade Four

(N = 721)

| SBP Scores | Grade Four Teacher ratings | | |
|---|---|---|---|
| | Behavior | Attitude | Special Services |
| 58-Item Total | -.40 | -.37 | -.42 |
| Factor I (Acting Out) | -.42 | -.43 | -.34 |
| Factor II (Developmental Immaturity) | -.25 | -.18 | -.44 |
| Factor III (Anxious) | -.17 | -.09 | -.13 |